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LETTER TO THE EDITOR

Is the new comer always better?

To the Editor,

We read Inoue et al's[1] article with great interest and would like to commend the authors' success and their innovation in combining a needlescopic grasper with a Securea surgical spacer for intraoperative retraction to avoid injury to the organ retracted (especially liver). However, there are several technical details that have not been well described, and we would also like to share our experience to raise more discussions on this cutting-edge procedure.

The authors did not specify where they inserted the needlescopic grasper, but roughly mentioned that it is from a separate stabbing wound apart from the laparoendoscopic single site (LESS) platform. In their Figure 1,[1] the axis of the needlescopic grasper was perpendicular to the liver, which made the spacer mandatory in preventing the grasper from penetrating the liver. However, both Gill et al[2] and our group[3,4] have published the application of needlescopic instruments during multiport needlescopic adrenalectomy, and in all cases the needlescopic liver retractor was inserted via a subxyphoid stabbing wound, which made the axis of the liver retractor parallel to the undersurface of the liver, and it lifted the liver away from the right adrenal gland (tumor) easily without the necessity of a special spacer (Figure 1). For the left needlescopic adrenalectomy, we rarely needed any assisting instrument to lift the spleen away, because adequate release of the spleen from its lateral peritoneal attachment and spenorenal ligament makes the spleen fall away from the left adrenal gland via gravity.[3,4]

The authors[1] mentioned about using a snake retractor to lift up the liver during their pure LESS approach, but did not detail where and how the snake retractor was inserted (only 3 ports were described in Section 2.2, "Surgery methodology" of their article). We described a "double-cross" technique for good exposure and facilitating surgery in such a scenario.[5] In short, aside from the two main operative instruments that were "crossed" inside the peritoneal cavity by the operator, we installed a fourth port at the LESS platform more caudally than the camera port for the liver retractor; moreover, the assistant needed to hold the camera and simultaneously hold the liver retractor to push up the liver to expose the adrenal tumor. Nevertheless, the telescope and the liver retractor are also "crossed" inside the abdomen to facilitate handling and exposure. This concept helped us considerably in numerous cases of LESS adrenalectomy and upper pole exposure of challenging LESS nephrectomy.

Needlescopic instruments (< 3 mm in diameter) are known for not leaving any recognizable scars[1] or just "mosquito bite" scars[2–4,6] on the patients. If there are durable and user-friendly needlescopic instruments available, the safety, efficiency, cosmesis, and postoperative convalescence of purely needlscopic adrenalectomy (allowing triangulation of the instruments), versus LESS adrenalectomy should be compared in a multicenter prospective randomized study to determine which one is more beneficial to the patients.

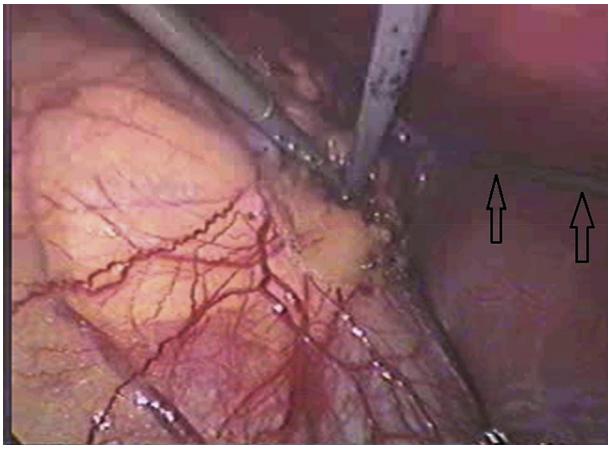

Figure 1 Intraoperative view of pure needlescopic-instrument clipless right adrenalectomy where the 2-mm liver retractor (arrows) lifted the liver up smoothly without any spacer via running parallel to the undersurface of the liver.

Conflicts of interest: None.

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Reply

We appreciate the comments made by Tsai et al in their letter regarding our study about needlescopic-assisted laparoendoscopic single site (LESS) adrenalectomy using novel needlescopic instruments.[1] We also acknowledge the similar work conducted by Gill et al.[2] Although we have not read Chueh et al's[3] paper about the "double-cross" technique, we think this technique is very unique and interesting.

In our paper, we advocated using a snake retractor to lift up the liver during conventional laparoscopic adrenalectomy rather than LESS adrenalectomy. We are currently using a snake retractor from the middle axillary line, and we have also used it via a subxiphoid stabbing wound. We think both approaches are equally usable and controllable to retract the liver.

Complications of liver bleeding have been reported in needlescopic surgery by Lai et al,[4] and we are concerned about the possibility of liver injury from needlescopic instruments because these devices are so thin. The Secrea endoscopic surgical spacer, which was codeveloped with Hogy Medical Co., Ltd., Tokyo, Japan has already been used for laparoscopic surgery. The key advantage of Secrea is that adjacent fragile tissue can be pressed softly with this surgical spacer.

Tsai et al mentioned that they rarely need any assisting instrument to lift the spleen away during left needlescopic adrenalectomy because adequate release of the spleen from its lateral peritoneal attachment and spenorenal ligament makes it fall away from the left adrenal gland via gravity. We could perform left LESS adrenalectomy without using needlescopic instruments, but we want to emphasize that we could easily complete this procedure using needlescopic instruments.

We very much appreciate the comments made by Dr Tsai and his colleagues.

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